

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017014**Date Inspected:** 18-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: ZPMC: Mr. Lv Li Qing, ABF: Peng Wen Jun

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Segment Trial Assembly

This QA Inspector observed ZPMC welder Mr. Jiang Peng Cheng, stencil 040562 used shielded metal arc process to tack weld temporary alignment plates between the top deck plate and edge plate of OBG segment 10CE and a cantilever beam baseplate. This QA Inspector observed a welding current of approximately 180 amps, the welding electrodes were stored in a heated oven and Mr. Jiang Peng Cheng appeared to be certified to perform this welding.

Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Tian Xi Dong, stencil 040334 used shielded metal arc process to make "T" stiffener hold back tack welds on OBG segment 10CE and 11AE bikepath side plates. This QA Inspector observed the welding electrodes were being stored in a portable rod oven which is warm to the touch and it was connected to an electric power cable. This QA Inspector observed a welding current of approximately 150 amps, the base materials were preheated with a torch prior to welding and Mr. Tian Xi Dong appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract

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documents

This QA Inspector observed ZPMC welder Mr. Li Hongren, stencil 062200 used shielded metal arc process to tack weld a weld temporary alignment plate to OBG segment 10AW and cross beam CB13 bottom plate stiffeners.

This QA Inspector measured a welding current of approximately 170 amps, the base material adjacent to this weld appeared to have been preheated with torch and Mr. Li Hongren appeared to be certified to perform this welding. Items observed on this date appeared to generally comply with applicable contract documents.

At around 2030 hours this QA Inspector asked ZPMC CWI Mr. Lv Li Qing and QC Inspector Mr. Wang Zhu if ZPMC personnel were performing welding inside cross beam CB14 and both Inspectors informed this QA Inspector that the ZPMC workers inside CB14 were performing grinding and no welding was being performed. At around 2130 hours this QA Inspector observed three welders performing welding inside OBG cross beam 14. This QA Inspector then went to the QC office and told ZPMC CWI Mr. Lv Li Qing and QC Inspector Mr. Wang Zhu that three ZPMC welders were performing tack welding inside cross beam CB14, and both of the Inspectors then went to CB14 and confirmed there were welders working at this location.

This QA Inspector observed ZPMC welder Mr. Xue Fu Tai stencil 500674 used shielded metal arc procedure WPS-B-P-2112-FCM-1 to make hold back tack welds between OBG segment 10CW and cross beam CB14 side plate stiffeners near panel point PP92. This QA Inspector observed Mr. Xue Fu Tai appeared to be certified to perform this welding and the welding electrodes were being stored in a portable rod oven which was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ZPMC welder Mr. Zhang Anlong, stencil 219210 used shielded metal arc procedure WPS-B-P-2112-FCM-1 to make hold back tack welds between OBG segment 10CE and cross beam CB14 side plate stiffeners near panel point PP92. This QA Inspector observed a welding current of approximately 160 amps, Mr. Zhang Anlong appeared to be certified to perform this welding and the welding electrodes were being stored in a portable rod oven which is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Guo Zhong Hua, stencil 044594 used shielded metal arc procedure WPS-B-P-2112-FCM-1 to make hold back tack welds between OBG segment 10CE and cross beam CB14 side plate stiffeners near panel point PP94. This QA Inspector observed a welding current of approximately 170 amps, Mr. Guo Zhong Hua appeared to be certified to perform this welding. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 19

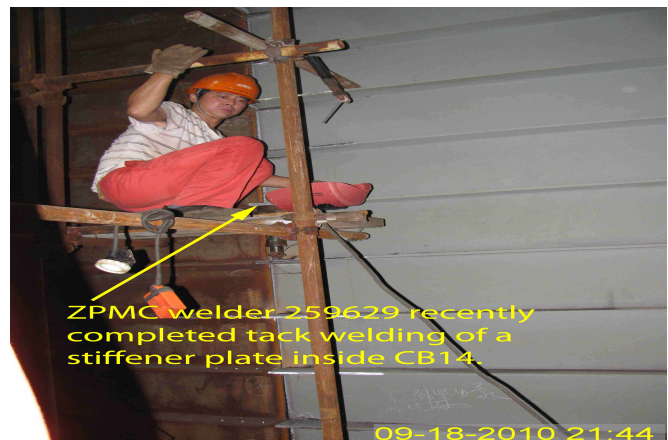
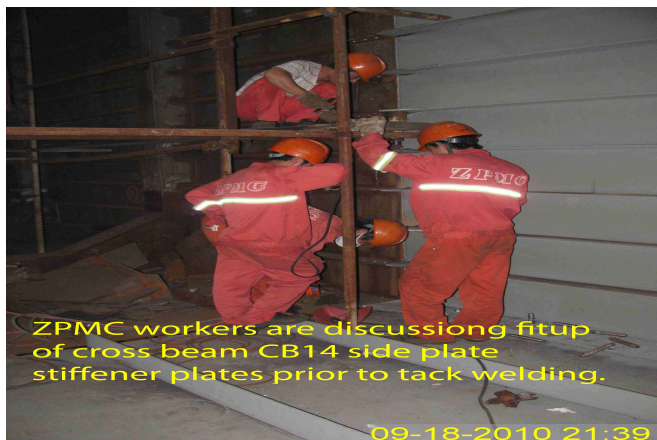
This QA Inspector observed ZPMC welder Mr. Shao Xiao Bin, stencil 259653 used shielded metal arc welding process to make bikepath tack welds BK004A6-013-063 and -080. This QA Inspector measured a welding current of approximately 160 amps. This QA Inspector observed the welding electrodes were stored in a portable electrode storage container that was connected to an electrical power supply and the electrodes were hot to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Li Jian Feng, stencil 260151 used shielded metal arc welding procedure WPS-B-P-2112 to make fillet tack welds BK4A-008-100 and 102. This QA Inspector observed the base material where these tack welds were made did not appear to have been preheated prior to welding. This QA Inspector informed ABF Quality Control Certified Welding Inspector Mr. Peng Wen Jun, who appeared to only speak the Chinese language that Mr. Li Jian Feng did not appear to have preheated the base materials. Mr. Li Jian Feng then got an acetylene torch and used it to preheat the next area where he then made additional tack welds. This QA Inspector observed a welding current of approximately 200 amps and the welding procedure lists this 2F position weld to be made with a maximum welding current of 180 amps. ABF CWI Mr. Peng Wen Jun observed this high welding current and he appeared to ask Mr. Li Jian Feng to adjust his welding machine to have a lower current. A few minutes later this QA Inspector measured Mr. Li Jian Feng to have a welding current of approximately 150 amps. This QA Inspector observed Mr. Li Jian Feng appeared to be certified to make these welds. Items observed on this date did not fully appear to comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Jian Feng, stencil 259629 used shielded metal arc welding process to make bikepath tack welds BK4A-011-130. This QA Inspector observed Mr. Li Jian Feng appeared to be certified to make this weld, the welding electrodes were stored in a portable electrode storage container that was connected to an electrical power supply and the electrodes were hot to the touch. Items observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul
Reviewed By:	Carreon,Albert

Quality Assurance Inspector
QA Reviewer
